

## **AMENDMENTS TO THE SPECIFICATION**

Please replace Paragraph [0033] with the following paragraph rewritten in amendment format:

**[0033]** The receiver subsystem 54 further includes a microcontroller 90. The microcontroller 90 receives the detected error rate from the forward error correction decoder ~~86~~ 88 and is operable to transmit the error rate for the optical data signal back to the transmitter subsystem 52. In particular, the error rate is transmitted to the microcontroller 80 residing in the transmitter subsystem. The microcontroller 80 is then able to adjust the chirp being applied to the optical data signal based on the error rate as described above. In a preferred embodiment, the error rate is transmitted via the supervisory channel 59 residing in the optical fiber medium. In this embodiment, each microcontroller 80 and 90 has send and receive access via the electrical backplane to the optical supervisory channel 59. However, it is also envisioned that the error rate may also be transmitted using a wayside data communication system that is independent from the optical network, or using a dedicated data channel embedded in the FEC overhead of the optical data channel, traveling in the opposite direction.